Target Audience
Medical doctors, pharmacists, nurses or other healthcare professionals are eligible.

Confirmed Faculty Members
Monika Chlebowicz, Groningen, Netherlands
Sophia David, Cambridge, United Kingdom
Tjibbe Donker, Oxford, United Kingdom
Hajo Grundmann, Freiburg, Germany
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Organizer
European Committee on Infection Control (EUCIC)
of the European Society of Clinical Microbiology and Infectious Diseases

Module Coordinators
• Nico T. Mutters, Freiburg, Germany
• Sandra Reuter, Freiburg, Germany
• Hajo Grundmann, Freiburg, Germany

Module Objectives
The EUCIC advanced module in Freiburg focuses on the application of modern methods and techniques such as whole genome sequencing (WGS) and mathematical modelling for infection prevention and control (IPC) efforts. It is a hands-on course with practical sessions, including analyses of real outbreak data and simulating the spread of different infectious diseases inside and outside of a hospital. You will have the opportunity to be taught by top experts from different centres from all over Europe. Learn how to interpret modelling and WGS data for infection control purposes, and get deeper insights into transmission dynamics and kinetics of infectious diseases.

Join us in Freiburg and use state-of-the-art technology to improve IPC management!
### Module Programme

#### Monday, 14 January 2019

**Basics of transmission dynamics and WGS**

**Location:** Haus zur Lieben Hand  
Löwenstrasse 16  
79098 Freiburg im Breisgau

- **13:00** Registration, coffee and refreshments
- **14:00** Welcome and introduction.  
  Hajo Grundmann
- **14:15** Basic principles of transmission dynamics in infection control.  
  Nico Mutters
- **14:45** Basic principles of WGS.  
  Sandra Reuter
- **15:30** Coffee break

#### Tuesday, 15 January 2019

**Workshop day – Whole genome sequencing and analysis**

**Location:** PC rooms 100/101  
Hermann-Herder-Strasse 10  
79104 Freiburg im Breisgau

- **09:00** Steps for managing an outbreak using WGS.  
  Nico Mutters
- **10:30** Coffee break
- **11:00** Workshop Part I: "Relatedness" – Introduction to mapping and phylogenetics
- **12:30** Lunch
- **13:30** Workshop Part II: "Resistance" – Introduction to assembly and antimicrobial resistance prediction
- **15:00** Workshop Part II: "Resistance" – Resistance profiling of isolates
- **15:30** Coffee break
- **16:00** Keynote: The role of plasmids in outbreaks and transmission chains.  
  Monika Chlebowicz
- **16:45 – 17:45** Optional preparation session

#### Wednesday, 16 January 2019

**WGS tools, network analysis and modelling**

**Location:** Haus zur Lieben Hand  
Löwenstrasse 16  
79098 Freiburg im Breisgau

- **09:00** Research tools with regards to WGS  
  Sophia David
- **10:00** Feedback from the frontline – tips, tricks, hints, pitfalls.  
  Sandra Reuter
- **11:00** Introduction to mathematic modelling and network analysis.  
  Tjibbe Donker
- **12:30** Lunch
- **13:30** Student preparation time
- **14:30 – 15:30** Exam

### Organization

#### Module Venues

- **Haus zur Lieben Hand**  
  Löwenstrasse 16  
  79098 Freiburg im Breisgau
- **PC Rooms, Poolsräume 100/101**  
  Hermann-Herder-Strasse 10  
  79104 Freiburg im Breisgau

#### Registration Fee

- **EUCIC trainees:** included in the fee of the training programme
- **The fee includes lunch and coffee breaks.**

#### EUCIC Trainees

- **EUCIC trainee registration fee is organized via the training programme, please see the following link:**  
  www.escmid.org/eucic.

#### CME Accreditation

- **The organizers of the module have applied for European CME accreditation through EACCME.**